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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,771	05/21/2004	Maxim Levit	42339-198286	9018

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EXAMINER

RAHMAN, FAHMIDA

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/849,771

Applicant(s)

LEVIT, MAXIM

Examiner

Fahmida Rahman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

1. Claims 1-26 are pending.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 24-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 24 recites a machine-readable medium that provides instruction to cause the platform to perform the operations. It is not apparent whether the medium comprises any tangible embodiment as the medium can be a transmitting medium such as signals ([00012] of applicant's disclosure). For the rest of the action, it is assumed that "computer readable storage medium" is intended.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6, 8, 10-11, 13, 15, 21-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Altmejd (US Patent 7036030).

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For claim 1, Altmeid teaches the following limitations:

A device (200) comprising: a chip (202); means for measuring the temperature of the chip (214); and means for regulating an operating voltage of the chip (230) based on the measured temperature of the chip (228).

For claim 6, the regulator 212 is external.

For claim 8, desired operating voltage comprises minimum allowed value, since Fig 1 comprises all possible combinations including minimum allowed value of voltage.

For claim 10, Altmeid teaches the following limitations:

A device (200) comprising: a chip (202); a thermometer (214) that outputs the temperature of said chip (304); a voltage regulator (212) coupled to the output of the thermometer and to the chip wherein said voltage regulator reduces the operating voltage of the chip (318) when the output of the thermometer is less than a threshold temperature (lines 46-50 of column 4).

For claim 11, note line 29 of column 4.

For claim 13, the regulator 212 is external.

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For claim 15, desired operating voltage comprises minimum allowed value, since Fig comprises all possible combinations including minimum allowed value of voltage.

For claim 21, Altmeid teaches the following limitations:

A method, comprising: measuring the temperature of a chip while the chip is ON (304); and reducing an operating voltage delivered to the chip (lines 46-50 of column 4) when the measured temperature of the chip drops below a predefined threshold temperature (desired point is the threshold temperature).

For claim 22, Fig 1 shows the threshold temperature curve, which comprises all possible values of voltage/temperature, including the idle state. Therefore, desired points on the curve may be selected below which chip is idle.

For claim 23, reduced voltage is changed to nominal voltage, when corresponding user activity presents on the system.

For claim 24, Altmeid teaches the following limitations:

A machine-readable medium that provides instructions, which when executed by a computing platform, cause said computing platform to perform operations comprising a method of: measuring the temperature of a chip while the electrical chip is ON (304); and reducing an operating voltage delivered to the chip (lines 46-50 of column 4) when

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the measured temperature of the chip drops below a predefined threshold temperature (desired point is the threshold temperature).

For claim 25, Fig 1 shows the threshold temperature curve, which comprises all possible values of voltage/temperature, including the idle state. Therefore, desired points on the curve may be selected below which chip is idle.

For claim 26, reduced voltage is changed to nominal voltage, when corresponding user activity presents on the system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 7, 9, 12, 14, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altmejd (US Patent 7036030).

For claims 2 and 3, processor 202 is a semiconductor device (line 29 of column 4), which is typically Si based component.

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For claims 4, 5, 12, Altmejd does not mention that the sensor is a thermocouple or thermal diode. Examiner takes an official notice that thermo couple and thermal diode is well known in the art. One ordinary skill in the art would have been motivated to use that particular sensor depending on his design choice.

For claims 9 and 16, 218 is not a firmware. Examiner takes an official notice that firmware storing data is well known in the art. One ordinary skill will be motivated to use firmware, since ROM is cheaper and provides non-volatile storage.

Claims 7, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altmejd in view of Georgiou et al (US patent 6047248).

Altmejd does not teach any internal regulator. Georgiou et al teach an on-chip voltage regulator (Fig 1). One ordinary skill in the art would have been motivated to have an on-chip regulator to reduce the extra delay, since on-chip component takes less delay than off-chip component.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Altmejd in view of Kikinis (US patent 5502838).

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For claim 17, Altmejd teach a set of processors but does not teach each chip has its own processor. Kikinis teaches a system where each processor has sensor and the regulator regulates voltage of each processor.

It would have been obvious for one ordinary skill in the art at the time the invention was made to combine the teachings of Kikinis and Altmejd. One ordinary skill in the art would be motivated to have two chips with individual sensor and individual control of voltage, since that would increase the performance of the system.

The combined teachings of Altmejd and Kikinis does not teach card comprising two chips. Examiner takes official notice that a PCB comprising two chips are well known in the art. One ordinary skill would prefer the PCB with two chips to implement the system with a reduced size.

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altmejd in view of Kikinis (US patent 5502838), further in view of Georgiou et al (US patent 6047248).

For claims 18 and 19, Altmejd teach a set of processors but does not teach each chip has its own processor. Kikinis teaches a system where each processor has sensor and the regulator regulates voltage of each processor.

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It would have been obvious for one ordinary skill in the art at the time the invention was made to combine the teachings of Kikinis and Altmejd. One ordinary skill in the art would be motivated to have two chips with individual sensor and individual control of voltage, since that would increase the performance of the system.

The combined teachings of Altmejd and Kikinis does not teach chip specific regulator. Georgiou et al teach the chip specific regulator (Fig 1).

It would have been obvious for one ordinary skill in the art at the time the invention was made to combine the teachings of Altmejd, Kikinis and Georgiou et al. One ordinary skill in the art would be motivated to have chip specific regulator, since that will increase the performance.

Combination of Altmejd, Kikinis and Georgiou et al does not teach card comprising two chips. Examiner takes official notice that a PCB comprising two chips are well known in the art. One ordinary skill would prefer the PCB with two chips to implement the system with a reduced size.

For claim 20, Examiner takes official notice that system comprising two regulators, where first regulator serves at least two chips and second regulator serving other chips are well known in the art. One ordinary skill would prefer such arrangement of regulators to ensure system's proper functionality.

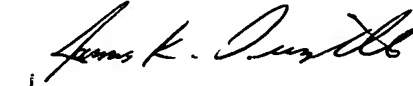
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahmida Rahman whose telephone number is 571-272-8159. The examiner can normally be reached on Monday through Friday 8:30 - 5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on 571-272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Fahmida Rahman
Examiner
Art Unit 2116


JAMES K. TRUSILLO
PRIMARY EXAMINER
TC 2100